

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐
(highlight changes)

APPLICATION FOR PERMIT TO DRILL				5. MINERAL LEASE NO: ML-22161		6. SURFACE: Federal	
1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>				7. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
B. TYPE OF WELL: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____ SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>				8. UNIT or CA AGREEMENT NAME:			
2. NAME OF OPERATOR: Thurston Energy Operating Company				9. WELL NAME and NUMBER: Thurston 13-29-9-24			
3. ADDRESS OF OPERATOR: PO BOX 240 CITY Vernal STATE UT ZIP 84078				PHONE NUMBER: (435) 789-2653			
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 753' FSL & 736' FWL <i>649887X 40.00181</i> AT PROPOSED PRODUCING ZONE: SAME AS ABOVE <i>4429225Y -109.24410</i>				10. FIELD AND POOL, OR WILDCAT: Undesignated <i>W. 13-29-9</i>			
				11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWSW 29 9 24E			
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 38.1 miles South of Vernal, UT				12. COUNTY: Uintah		13. STATE: UTAH	
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) 736'		16. NUMBER OF ACRES IN LEASE: 320		17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 40			
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) 4,100'		19. PROPOSED DEPTH: 8,000		20. BOND DESCRIPTION: 0269434510			
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 5439.2 GR		22. APPROXIMATE DATE WORK WILL START: 12/31/2005		23. ESTIMATED DURATION: 30 DAYS			

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
12 1/4	8 5/8 J-55 36#	2,000	PREMIUM LITE II 250 SX 3.38 CF 11.0 PPG
			CLASS "G" 329 SX 1.2 CF 15.6 PPG
			CALCIUM CHLORIDE 200 SX 1.10 CF 15.6 PPG
7 7/8	4 1/2 N-80 11.6#	8,000	PREMIUM LITE II 200 SX 3.3 CF 14.3 PPG

ATTACHMENTS

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

CONFIDENTIAL

- | | |
|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER | <input checked="" type="checkbox"/> COMPLETE DRILLING PLAN |
| <input checked="" type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER | <input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER |

NAME (PLEASE PRINT) **WILLIAM A RYAN** TITLE **AGENT**
SIGNATURE *William A Ryan* DATE **11/14/2005**

(This space for State use only)

API NUMBER ASSIGNED: **43-04737406**


**Approved by the
Utah Division of
Oil, Gas and Mining**

**RECEIVED
NOV 18 2005**

APPROVAL:
Date: *01-23-06* DIV. OF OIL, GAS & MINING
By: *[Signature]*
(See Instructions on Reverse Side)

THURSTON ENERGY OPERATING COMPANY

NOTES:

- 

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS
PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS
MADE BY ME OR UNDER MY SUPERVISION AND THAT
THE SAME ARE TRUE AND CORRECT TO THE BEST OF
MY KNOWLEDGE AND BELIEF BY R.

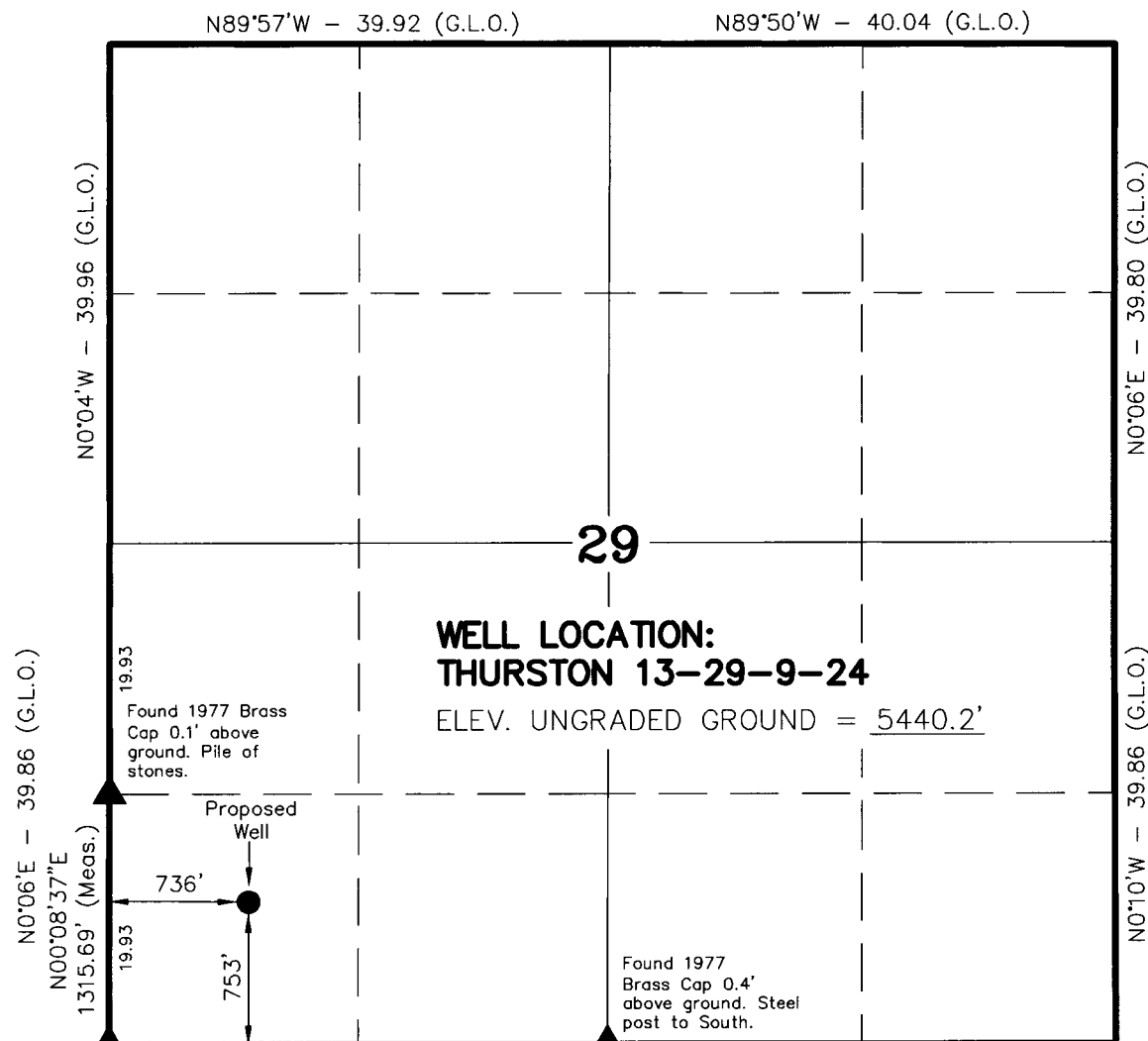
REGISTERED LAND SURVEYOR
REGISTRATION No. 362251
STATE OF UTAH

38 WEST 100 NORTH. - VERNAL, UTAH 84078
(435) 789-1365

SHEET

2

OF 10



Found 1977
Brass Cap 0.6'
above ground. Pile
of stones to West.
Cedar Post to North

S89°59'10"W - (Basis of Bearings)
2623.77' (Measured)
S89°57'W - 39.75 (G.L.O.)

N89°59'W - 40.32 (G.L.O.)

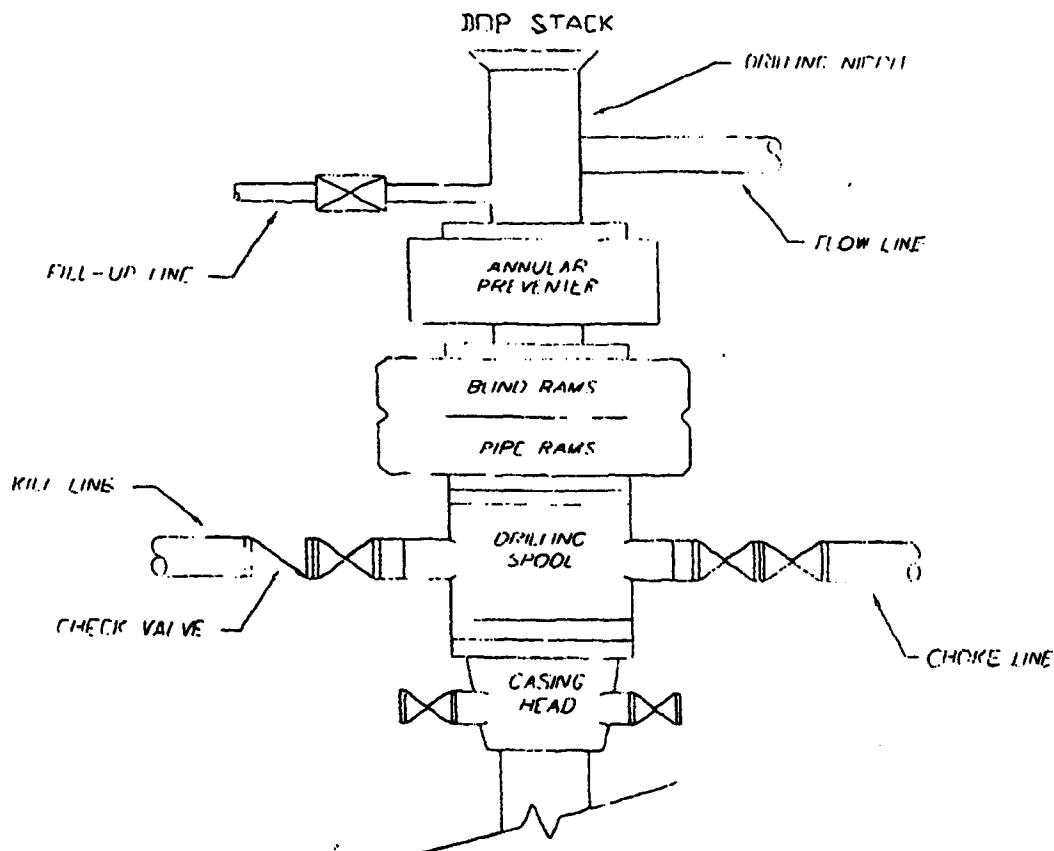
THURSTON 13-29-9-24
(Proposed Well Head)
NAD 83 Autonomous
 LATITUDE = 40° 00' 06.4"
 LONGITUDE = 109° 14' 40.9"

▲ = SECTION CORNERS LOCATED

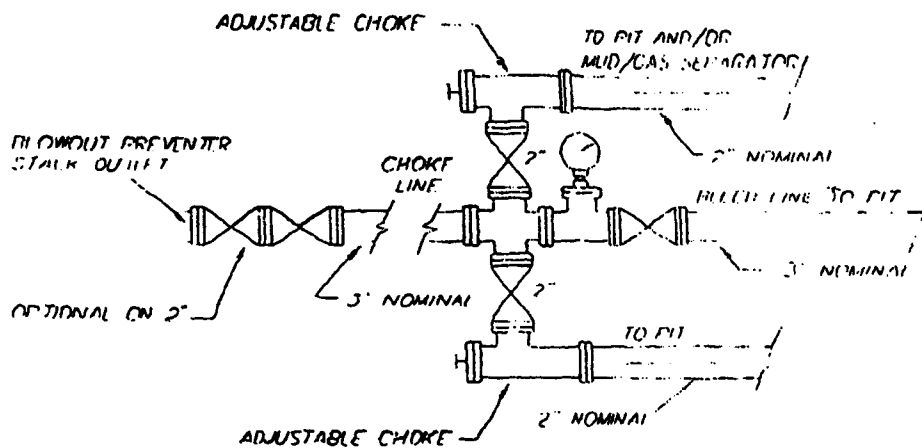
BASIS OF ELEVATION IS BENCH MARK 46 EAM LOCATED IN THE SW 1/4 OF SECTION 23, T9S, R24E, S.L.B.&M. THE ELEVATION OF THIS BENCH MARK IS SHOWN ON THE BONANZA 7.5 MIN. QUADRANGLE AS BEING 5550'.

THE HOUSTON EXPLORATION COMPANY

TYPICAL 3,000 p.s.i. BLOWOUT PREVENTER SCHEMATIC



TYPICAL 3,000 p.s.i. CHOKE MANIFOLD SCHEMATIC



APPLICATION FOR TRANSPORTATION AND
UTILITY SYSTEMS AND FACILITIES
ON FEDERAL LANDS

FORM APPROVED
OMB NO. 1004-0060
Expires: December 31, 2001

FOR AGENCY USE ONLY

NOTE: Before completing and file application, the applicant should completely review this package and schedule a preapplication meeting with representatives of the agency responsible for processing the application. Each agency may have specific and unique requirements to be met in preparing and processing the application. Many times, with help of the representative, the application can be completed at the application meeting.

Application Number

Date Filed

1 Name and address of the applicant (include Zip code)

**Thurston Energy Operating Co.
2754 W. Hwy. 40
Vernal, UT 84078**

2 Name, title, and address of authorized agent if different from item 1 (include zip code)

**William A Ryan
290 S 800 E
Vernal, UT 84078**

3 TELEPHONE (area code)

Applicant

435-789-2653

Authorized Agent

435-789-0968

4

- a ☐ Individual
b ☒ Corporation*
c ☐ Partnership/Association*
d ☐ State Government/State Agency
e ☐ Local Government
f ☐ Federal Agency

* If checked complete supplemental page

6 If an individual, or partnership are you a citizen(s) of the United States?

7 Project description (describe in detail): (a) Type of system or facility, e.g., canal, pipeline, road); (b) related structures and facilities; (c) physical specifications (length, width, grade, etc.); (d) term of years needed; (e) time of year of use or operation; (f) Volume or amount of production to be transported; (g) duration and time of construction; and (h) temporary work area needed for construction (Attach additional sheets, if additional space is needed.)

Please see attached A.P.D.

8 Attach a map covering area and show location of proposal

9 State or Local government approval ☐ Attached ☒ Applied for ☐ Not Required

10 Nonreturnable application fee: ☒ Attached ☐ Not Required

11 Does Project cross international or affect international waterways? ☐ Yes ☒ No

12 Give statement of your technical and financial capability to conduct, operate, maintain, and terminate system for which authorization is being requested

Thurston Energy Operating Company has the financial capability to construct, operate, maintain, and terminate the proposed drilling program

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DIV. OF OIL, GAS & MINING

13 a Describe other reasonable alternative routes and ☐ es considered.

None were considered

b Why were these alternatives not selected

Please see attached APD.

c Give explanation as to why it is necessary to cross Federal Lands.

To access State minerals located below Federal surface

14 List authorization and pending application filed for similar projects which may provide information to authorizing agency. (specify number, date, code, or name)

An Application for Permit to Drill has been filed with the State of Utah Division of oil, Gas and Mining.

15 Provide statement of need for project, including the economic feasibility and items as: (a) cost of proposal (construction, operation, and maintenance); (b) estimated cost of next best alternative; and © expected public benefits.

a. Please see attached APD.

b. Please see attached APD.

16 Describe probable effects on the population in the area, including the social and economic aspects, and the rural lifestyles.

There will be no significant impacts on the areas population, social or economic aspects or the rural lifestyle from the proposed project.

17 Describe likely environmental effects project will have on: (a) air quality; (b) visual impacts; © surface and ground water quality and Quantity; (d) the control or structural change on any stream or other body of water; (e) existing noise levels; and (f) the surface of the land including vegetation, permafrost, soil, and soil stability.

a. minimal

d. no change

b. minimal

e. minimal

c.minimal

f. minimal

18 Describe the probable effects that the proposed project will have on (a) populations of fish, plantlike, wildlife, and marine life, including threatened and endangered species; and (b) marine mammals, including hunting, capturing, collecting, or killing these animals.

a. There will be little or no impacts on fish, plantlife, wildlife, and threatened and endangered species

b. NA

19 State whether any hazardous material, as defined in this paragraph, will be used, transported or stored on or within the right-of-way or any of the right-of-way facilities, or used in the construction, operation, maintenance or termination of the right-of-way or any of its facilities. "Hazardous Material" means any substance, pollutant or contaminant that is listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. 9601 et seq., and its regulations. The definition of hazardous substances under CERCLA includes any "hazardous waste" as defined in the Resource Conservation and Recovery Act of 1976 (RCRA), ass amended, 42 U.S.C. 6901 et seq., and its regulations. The term hazardous material also includes any nuclear or byproduct material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq. The term does not include petroleum, including crude oil or any fraction thereof that is not otherwise specifically listed or described as a hazardous substance, under CERCLA Section 101(14), 42 U.S.C. 9601(14), nor does the term include natural gas.

Please see attached APD.

20 Name all the Department(s)/Agency(ies) where this application is being filed.

Bureau of Land Management, Vernal Field Office. Vernal, UT

Cc: Utah Division of Oil, Gas and Mining.

I HEREBY CERTIFY, That I am of legal age and authorized to do business in the State and that I have personally examined the information contained the information contained in the application and believe that the formation submitted in correct to the best of my knowledge.

Signature of applicant

Date

11/14/2005

Titl 18, U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the Utah States any false.

fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

Ten Point Plan

Thurston Energy Operating Company

Thurston 13-29-9-24

Surface Location SW ¼ SW ¼, Section 29, T. 9S., R. 24E.

1. Surface Formation

Green River

2. Estimated Formation Tops and Datum:

<u>Formation</u>	<u>Depth</u>	<u>Datum</u>
Green River	Surface	+5,439' G.L.
Uteland Butte Limestone	3,545	+1,894'
Wasatch	3,635	+1,804'
Mesaverda	5,385	+54'
Buck Tounge	6,810	-1,371'
Castlegate	6,880	-1,441'
TD	8,000	-2,561'

A 11" hole will be drilled to 2,000' +/- . The hole depth will depend on the depth that the Birds Nest Zone is encountered. The hole will be drilled 400' beyond the top of the Birds Nest.

3. Producing Formation Depth:

Formation objective includes the Green River, Wasatch, Mesaverde and its sub-members.

Off Set Well information

Permitted/Drilled:

Southman CYN. 1-30-9-24

Southman CYN. 6-30

Southman CYN. 8-30

Southman CYN. 7-30-9-24

Southman CYN. 9-30

Southman CYN. 14-30

Red Wash 9-24-23-30

Red Wash 9-24-34-30

Diablo 924-31C

Diablo 924-31J

Producing Wells:

Southman CYN. 2D-30

Abandon Wells:

Devils Playground 32-31

Shut in Well:

Dirty Devil Unit 11-29

4. Proposed Casing:

<u>Hole Size</u>	<u>Casing Size</u>	<u>Weight/FT</u>	<u>Grade</u>	<u>Coupling & Tread</u>	<u>Casing Depth</u>	<u>New/Used</u>
11	8 5/8	36#	J-55	STC	2000	NEW
7 7/8	4 1/2	11.6#	N-80	LTC	T.D.	NEW

Cement Program:

The Surface Casing will be cemented to the Surface as follows:

	<u>Casing Size</u>	<u>Cement Type</u>	<u>Cement Amounts</u>	<u>Cement Yield</u>	<u>Cement Weight</u>
Lead:	8 5/8	Premium Lite II .05#/sk Static Free .25#/sk Cello Flake 5#/sk KOL Seal .002 gps FP-6L 10% Bentonite .5% Sodium Metasilicate 3% Potassium Chloride	250 sks. +/-	3.38ft ³ /sk	11.0 ppg
Tail:	8 5/8	Class "G" 2% Calcium Chloride .25#/sk Cello Flake	329 sks. +/-	1.2ft ³ /sk	15.6 ppg
Top Job:	8 5/8	4% Calcium Chloride .25#/sk Cello Flake	200 sks. +/-	1.10ft ³ /sk	15.6 ppg

Production casing will be cemented to 2,500' or higher as follows:

	<u>Casing Size</u>	<u>Cement Type</u>	<u>Cement Amounts</u>	<u>Cement Yield</u>	<u>Cement Weight</u>
Lead:	4 1/2	Premium Lite II .25#/sk Cello Flake .05#/sk Static Free 5#/sk Kol Seal 3% Potassium Chloride .055 gps FP-6L 10% Bentonite .5 Sodium Metasilicate	200 sks +/-	3.3ft ³ /sk	11.0 ppg
Tail:	4 1/2	Class "G" .05% Static Free 2 Sodium Chloride .1% R-3 2% Bentonite	400 sks +/-	1.56ft ³ /sk	14.3 ppg

5. BOP and Pressure Containment Data:

The anticipated bottom hole pressure will be less than 3000 psi.

A 3000-psi WP BOP system as described in the BOP and Pressure Containment Data (attached) will be installed and maintained from the 8 5/8" surface casing. The BOP system including the casing will be pressure tested to minimum standards set forth in "On Shore Order #2". The BOP will be mechanically checked daily during the drilling operation.

6. Mud Program:

<u>Interval</u>	<u>Mud weight lbs./gal.</u>	<u>Viscosity Sec./OT.</u>	<u>Fluid Loss Ml/30 Mins.</u>	<u>Mud Type</u>
0-2000	Air/Clear Water	-----	No Control	Water/Gel
2000-T.D.	8.4-12.0	30	8-10	Water/Gel

7. Auxiliary Equipment

Upper Kelly cock, full opening stabbing valve, 2 ½" choke manifold and pit level indicator.

8. Testing, Coring, Sampling and Logging:

- a) Test: None are anticipated.
- b) Coring: There is the possibility of sidewall coring.
- c) Sampling: Every 10' from 2000' to T.D.
- d) Logging:

Type	Interval
DLL/SFL W/GR and SP	T.D. to Surf. Csg
FDC/CNL W/GR and CAL	T.D. to Surf. Csg

9. Abnormalities (including sour gas):

No abnormal pressures, temperatures or other hazards are anticipated. Oil and gas shows are anticipated in the Wasatch Formation. Other wells drilled in the area have not encountered over pressured zones or H₂S.

10. Drilling Schedule:

The anticipated starting date is 12/31/05. Duration of operations is expected to be 30 days.

THURSTON ENERGY OPERATING COMPANY

13 POINT SURFACE USE PLAN

FOR WELL

THURSTON 13-29-9-24

LOCATED IN SW ¼ SW ¼

SECTION 29, T.9S, R24E, S.L.B.&M.

UINTAH COUNTY, UTAH

LEASE NUMBER: ML-22161

SURFACE OWNERSHIP: FEDERAL

1. Existing Roads:

Thurston Energy Operating CO

Thurston #13-29-9-24

Section 29, T9S, R 24E

Starting in Vernal, Utah:

Proceed in an easterly, then southerly direction from Vernal, Utah along US Highway 40 approximately 3.3 miles to the junction of State Highway 45; exit right and proceed in a southerly direction along State Highway 45 approximately 36 miles to the junction of County B road 3410 (this road is located approximately 0.5 miles south of Bonanza, Utah) exit right and proceed in a westerly direction along county B road 3410 approximately 4.2 miles to the junction of county B road 3420; exit left and proceed in a southerly direction along county B road 3420 approximately 1.4 miles to the intersection of county B road 3425; exit left and proceed in a southerly direction along county B road 3425 approximately 0.5 miles to the proposed access road; follow road flags in a southeasterly direction approximately 830' to the proposed location.

Total distance from Vernal, Utah to the proposed well location is approximately 45.6 miles.

All existing roads to the proposed location are State of Utah, BLM maintained or County Class D roads. Please see the attached map for additional details.

2. Planned access road

The proposed access road will be approximately 830' +/- of new construction on lease. The road will be graded once per year minimum and maintained.

A) Approximate length	830 ft
B) Right-of-Way width	30 ft
C) Running surface	18 ft
D) Surface material	Native soil
E) Maximum grade	5%
F) Fence crossing	None
G) Culvert	None
H) Turnouts	None
I) Major cuts and fills	None
J) Road Flagged	Yes
K) Access road surface ownership	Federal
L) All new construction on lease	Yes
M) Pipe line crossing	No

Please see the attached location plat for additional details.

An off lease Right-of-Way will not be required.

All surface disturbances for the road and location will be within the lease boundary.

3. Location of existing wells

The following wells are located within a one-mile radius of the location site.

A) Producing well	
Southman Canyon 2D-30	
B) Water well	None

- C) Abandoned well
 Devils Playground 32-31
 D) Temp. abandoned well None
 E) Disposal well None
 F) Drilling /Permitted well
 Southman Canyon 1-20-9-24
 Southman Canyon 6-30
 Southman Canyon 7-30-9-24
 Southman Canyon 9-30
 Southman Canyon 8-30
 Southman Canyon 14-30
 Southman Canyon 14-30
 Dialbo 924-31C
 Dialbo 942-31J
 Red Wash 9-24-23-30
 Red Wash 9-24-34-30
 G) Shut in wells
 Dirty Devil Unit 11-29
 H) Injection well None
 I) Monitoring or observation well
 None

Please see the attached map for additional details.

4. Location of tank batteries, production facilities and production gathering service lines.

All production facilities are to be contained within the proposed location site. Please see the attached plat plan for a typical gas well separator installation and well site piping.

All permanent (on site for more than six months or longer) structures constructed or installed will be painted a **Carlsbad Canyon** color. Facilities required to comply with O.S.H.A. (Occupational Safety and Health Act) will be excluded. The required paint color is **Carlsbad Canyon**.

All tanks will be surrounded by a dike of sufficient capacity to contain the storage capacity of the largest tank in the battery. The integrity of the dike will be maintained.

The operator will adhere to all site security guidelines and regulation identified in 43 cfr 3126.7.

All off lease storage, off lease measurement, commingling on lease or off lease, of production, will have prior written approval from the authorized officer.

If the well is capable of economic production a surface gas line will be required.

Approximately 4,430' +/- of 3" surface pipeline would be constructed on Federal Lands. The pipeline will tie into the existing pipeline in Sec 29, T9S, R24E. The pipeline will be strung and boomed to the north of the location and parallel to the access roads.

An off lease Right-of-Way will not be required.

Please see the attached location diagrams for pipeline location. There will be no additional surface disturbances required for the installation of a gathering line.

The gas meter run will be located within 500' of the wellhead. The gas line will be buried or anchored down from the wellhead to the meter. Meter runs will be housed and/or fenced.

The gas meter will be calibrated and the tank strapped in place prior to any deliveries. Tests for meter accuracy will be conducted monthly for the first three months on new meter installations and at least quarterly thereafter. The authorized officer will be provided with a date and time for the initial meter calibration and all future meter-proving schedules. A copy of the meter calibration report will be submitted to the BLM's Vernal District office and State of Utah, Division of Oil, Gas, and Mining. All measurement facilities will conform to API (American Petroleum Institute) and AGA (American Gas Association) standards for gas and liquid hydrocarbon measurement.

5. Location and type of water supply

Water for drilling and cementing will come from The White River at the Bonanza Bridge, Permit # - T75376.

6. Source of construction materials

All construction material for this location site and access road shall be borrow material accumulated during construction of the location site and access road. Additional road gravel or pit lining material will be obtained from private resources.

7. Methods for handling waste disposal

A) Pit construction and liners:

The reserve pit will be approximately 12 ft. deep and most of the depth shall be below the surface of the existing ground. Please see the attached plat for details.

The reserve pit will be lined.

The reserve pit will be used to store water for drilling. A semi-closed system will be used to drill the well. All fresh water for drilling will come from a frac tank placed on location and from the rig tank. The pit will be used to hold non-flammable materials such as cuttings, salt, drilling fluids, chemicals, produced fluids, etc.

B) Produced fluids:

Produced water will be confined to the reserve pit, or if deemed necessary, a storage tank for a period not to exceed 90 days after initial production. During the 90-day period an application for approval for permanent disposal method and location will be submitted to the authorized officer.

C) Garbage:

A trash cage fabricated from expanded metal will be used to hold trash on location and will be removed to an authorized landfill location.

D) Sewage:

A portable chemical toilet will be supplied for human waste.

E) Site clean-up:

After the rig is moved off the location the well site area will be cleaned and all refuse removed.

8. Ancillary facilities

There are no ancillary facilities planned at this time and none are foreseen for the future.

9. Well-site layout

Location dimensions are as follows:

A) Pad length	345 ft
B) Pad width	260 ft
C) Pit depth	12 ft
D) Pit length	150 ft
E) Pit width	75 ft
F) Max cut	19.4 ft
G) Max fill	8.7 ft
H) Total cut yds.	7,620 cu yds
I) Pit location	South end
J) Top soil location	North and West ends
K) Access road location	West end
L) Flare Pit	corner C

Please see the attached location diagram for additional details.

All pits will be fenced according to the following minimum standards:

- A) Thirty nine inch net wire shall be used with at least one strand of wire on top of the net wire. Barbed wire is not necessary if pipe or some type of

reinforcement rod is attached to the top of the entire fence.

- B) The net wire shall be no more than 2 inches above the ground. The barbed wire shall be 3 inches above the net wire. Total height of the fence shall be at least 42 inches.

- C) Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

- D) Standard steel, wood or pipe posts shall be used between the corner braces. Maximum distance between any two posts shall be no greater than 16 ft.

- E) All wire shall be stretched by using a stretching device before it is attached to the corner posts.

10. Plans for restoration of the surface

Prior to construction of the location, the top 6 inches of soil material will be stripped off the location and the pit area. The topsoil removed and piled will amount to approximately 1,500 cubic yards of material. Topsoil will be stockpiled in one distinct pile. Placement of the topsoil is noted on the attached location plat. The topsoil pile from the location will be seeded as soon as the soil is stock piled with the seed mix listed. When all drilling and completion activities have been completed and the pit back-filled the topsoil from the pit area will be spread on the pit area. The pit area

will be seeded when the soil has been spread. The unused portion of the location (the area outside the dead men) will be re-contoured.

The dirt contractor will be provided with an approved copy of the surface use plan prior to construction activities.

Changes to the drainage during the construction activities shall be restored to its original line of flow or as near as possible when the pit is back-filled

All disturbed areas will be re-contoured to the approximate natural contours. Prior to back filling the pit the fences around the reserve pit will be removed.

The reserve pit will be reclaimed within 90 days of well completion. If the reserve pit has not dried sufficiently to allow back filling, an extension on the time requirement for back filling the pit will be requested. Once reclamation activities have begun, they shall be completed within 30 days.

After the reserve pit has been reclaimed, no depressions in the soil covering the reserve pit will be allowed. The objective is to keep seasonal rainfall and run off from seeping into the soil used to cover the reserve pit. Diversion ditches and water bars will be used to divert the run off as needed.

When restoration activities have been completed, the location site and new access road cuts and shoulders shall be reseeded. Prior

to reseeding, all disturbed areas will be scarified. And left with a rough surface.

A) Seeding dates:

Seed will be spread when topsoil is stock piled and when reclamation work is performed.

The seed mix and quantity list will be used whether the seed is broadcast or drilled.

B) Seed Mix:

**To be determined by the
Authorized Officer.**

11. Surface ownership:

Access road	Federal
Location	Federal
Pipe line	Federal

12. Other information:

A) Vegetation

The vegetation coverage is Slight. The majority of the existing vegetation consists of Sagebrush. Rabbit brush, Bitter Brush, and Indian Rice grass are also found on the location.

B) Dwellings:

There are no dwelling or other facilities within a one-mile radius of the location.

C) Archeology:

The location has been surveyed.
A copy of that survey will be
forwarded to your office.

If, during operations, any
archaeological or historical
sites, or any objects of antiquity
(subject to the antiquities act of
June 8, 1906) are discovered, all
operations which would affect
such sites will be suspended and
the discovery reported promptly
to the surface management
agency.

D) Water:

**The nearest water is the
White River located
approximately 3 miles to the
South.**

E) Chemicals:

No pesticides, herbicides or
other possible hazardous
chemicals will be used without
prior application.

F) Notification:

- a) Location Construction
At least forty eight (48)
hours prior to
construction of location
and access roads.
- b) Location completion
Prior to moving on the
drilling rig.
- c) Spud notice
At least twenty-four (24)
hours prior to spudding
the well.
- d) Casing string and

cementing
At least twenty-four (24)
hours prior to running
casing and cementing all
casing strings.

- e) BOP and related
equipment tests
At least twenty-four (24)
hours prior to initial
pressure tests.
- f) First production notice
Within five (5) business
days after the new well
begins, or production
resumes after well has
been off production for
more than 90 days.

G) Flare pit:

The flare pit will be located in
corner C of the reserve pit out
side the pit fences and 100 feet
from the bore hole on the east
side of the location. All fluids
will be removed from the pit
within 48 hours of occurrence.

13. Lessees or Operator's representative
and certification

A) Representative

William A. Ryan
Rocky Mountain Consulting
Vernal, UT 84078

Office 435-789-0968
Fax 435-789-0970
Cellular 435-828-0968

All lease and/or unit operations
will be conducted in such a
manner that full compliance is
made with all applicable laws,

regulations, onshore oil and gas orders, and any applicable notices to lessees. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

This drilling permit will be valid for a period of one year from the date of approval. After permit termination, a new application will be filed for approval for any future operations.

B) Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill-site and access route, that I am familiar with the conditions which presently exist, that the statements made in this plan are, to the best of my knowledge and belief, true and correct, and that the work associated with the operation proposed herein will be preformed by Thurston Energy Operating Company and its contractors and subcontractors in conformity with this plan and terms and conditions with this plan and the terms and conditions under which it is approved.

Date 11/15/05



William A. Ryan, Agent
Rocky Mountain Consulting

Onsite Dates:

Statement of use of Hazardous Materials

No chemical(s) from the EPA's consolidated list of Chemicals Subject to Reporting under Title III of the Superfund Amendments and Reauthorization, Act (SARA) of 1986 will be used, produced, transported, stored, disposed, or associated with the proposed action. No extremely hazardous substances, as defined in 40 cfr 355, will be used, produced, stored, transported, disposed, or associated with the proposed action.

If you require additional information please contact:

William A Ryan
Agent for Thurston Energy Operating CO
290 S 800 E
Vernal, UT 84078

435-789-0968 Office
435-828-0968 Cell

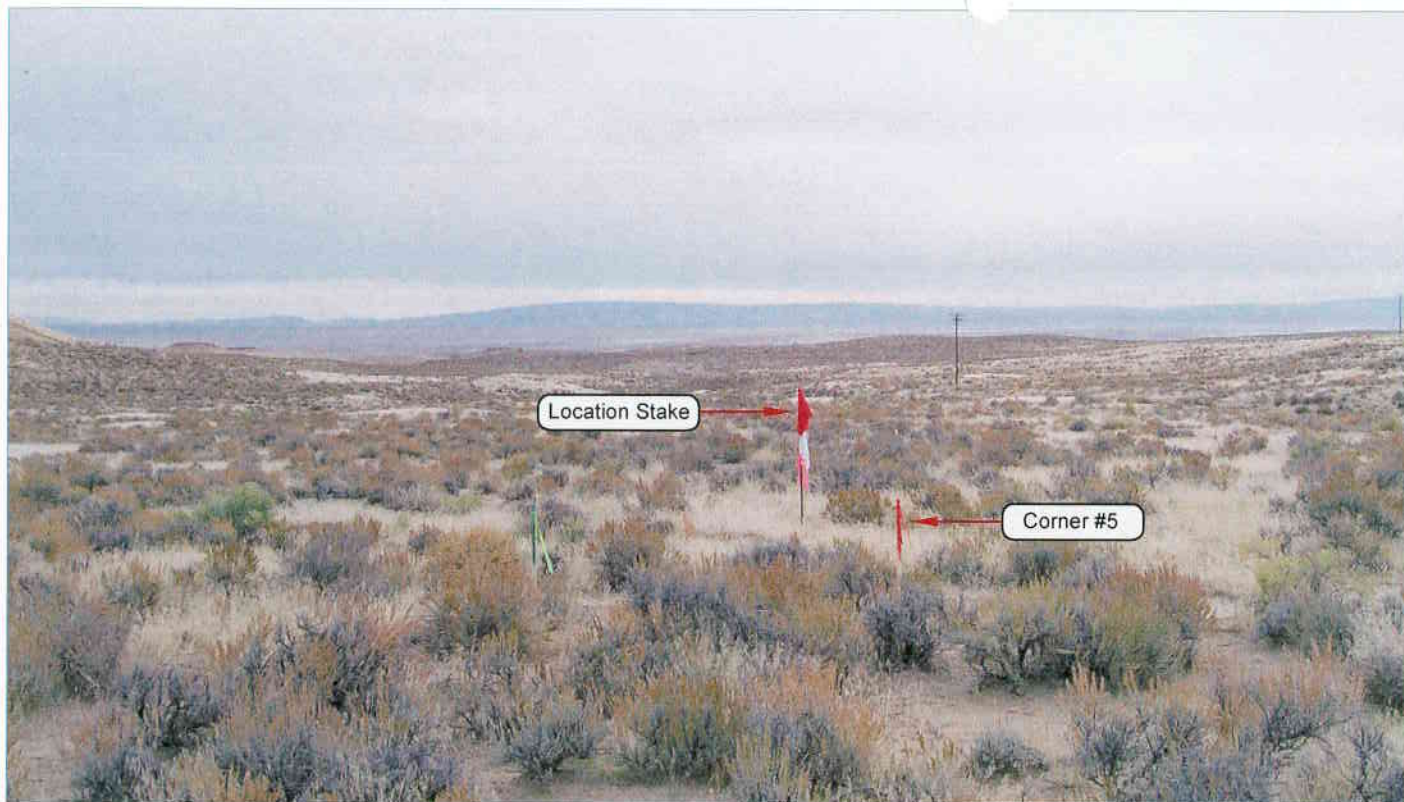


PHOTO VIEW: FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: SOUTHEASTERLY

THURSTON ENERGY OPERATING COMPANY

**Thurston 13-29-9-24
SECTION 29, T9S, R24E, S.L.B.&M.
753' FSL & 736' FWL**

LOCATION PHOTOS

LOCATION PHOTOS		DATE TAKEN: 10-18-05
		DATE DRAWN: 11-02-05
TAKEN BY: K.R.K.	DRAWN BY: M.W.W.	REVISED:

Timberline Land Surveying, Inc.
38 West 100 North Vernal, Utah 84078
(435) 789-1365

**SHEET
1
OF 10**

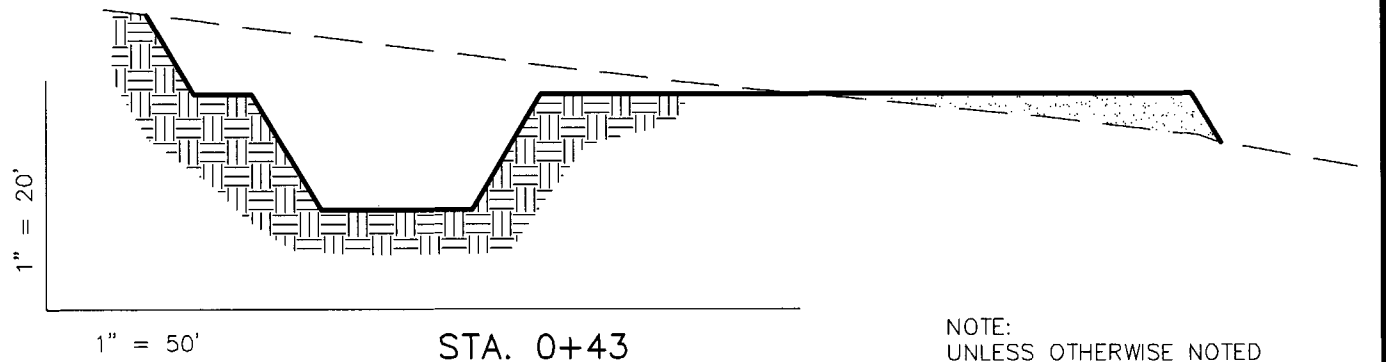
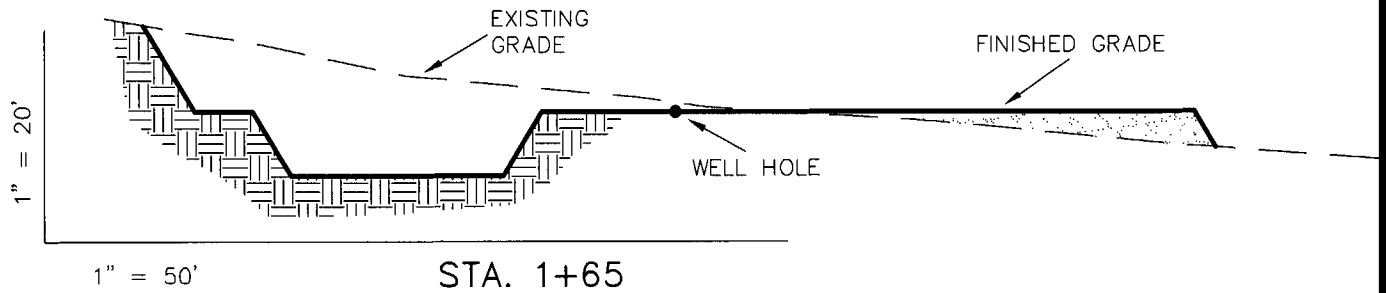
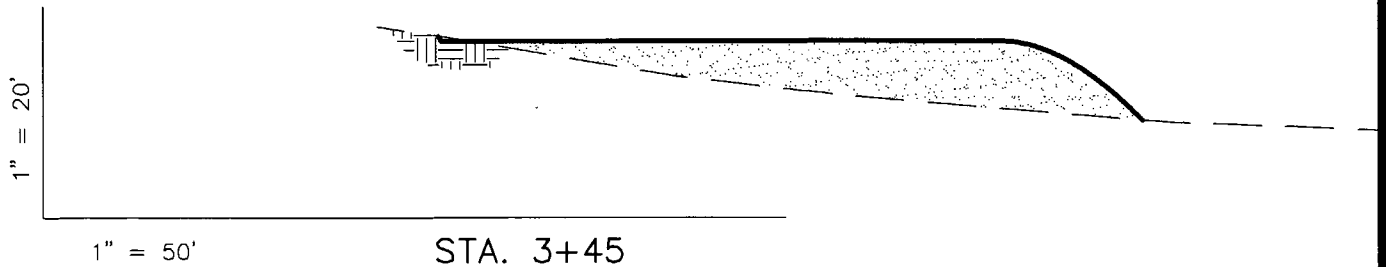
CUT SHEET
THURSTON 13-29-9-24



Section 29, T9S, R24E, S.L.B.&M.		Qtr/Qtr Location: SW SW	Footage Location: 753' FSL & 736' FWL	
Date Surveyed: 10-18-05	Date Drawn: 11-4-05	Date Last Revision:	Timberline (435) 789-1365 <i>Land Surveying, Inc.</i> 38 WEST 100 NORTH VERNAL, UTAH 84078	
Surveyed By: K.R.K.	Drawn By: J.R.S.	Scale: 1" = 50'		
			SHEET 3 OF 10	

THURSTON ENERGY OPERATING COMPANY

CROSS SECTIONS THURSTON 13-29-9-24



NOTE:
UNLESS OTHERWISE NOTED
ALL CUT/FILL SLOPES ARE
AT 1.5:1



REFERENCE POINTS

185' NORTHEASTLY = 5434.1'
235' NORTHEASTERLY = 5432.5'
215' SOUTHEASTERLY = 5438.9'
265' SOUTHEASTERLY = 5441.7'

Pit overburden is included in pad cut.

ESTIMATED EARTHWORK QUANTITIES (No shrink or swell adjustments have been used) (Expressed in Cubic Yards)				
ITEM	CUT	FILL	6" TOPSOIL	EXCESS
PAD	4,280	5,950	Topsoil is not included in Pad Cut	-1,670
PIT	3,340	0		0
TOTALS	7,620	5,950	1,500	1,670

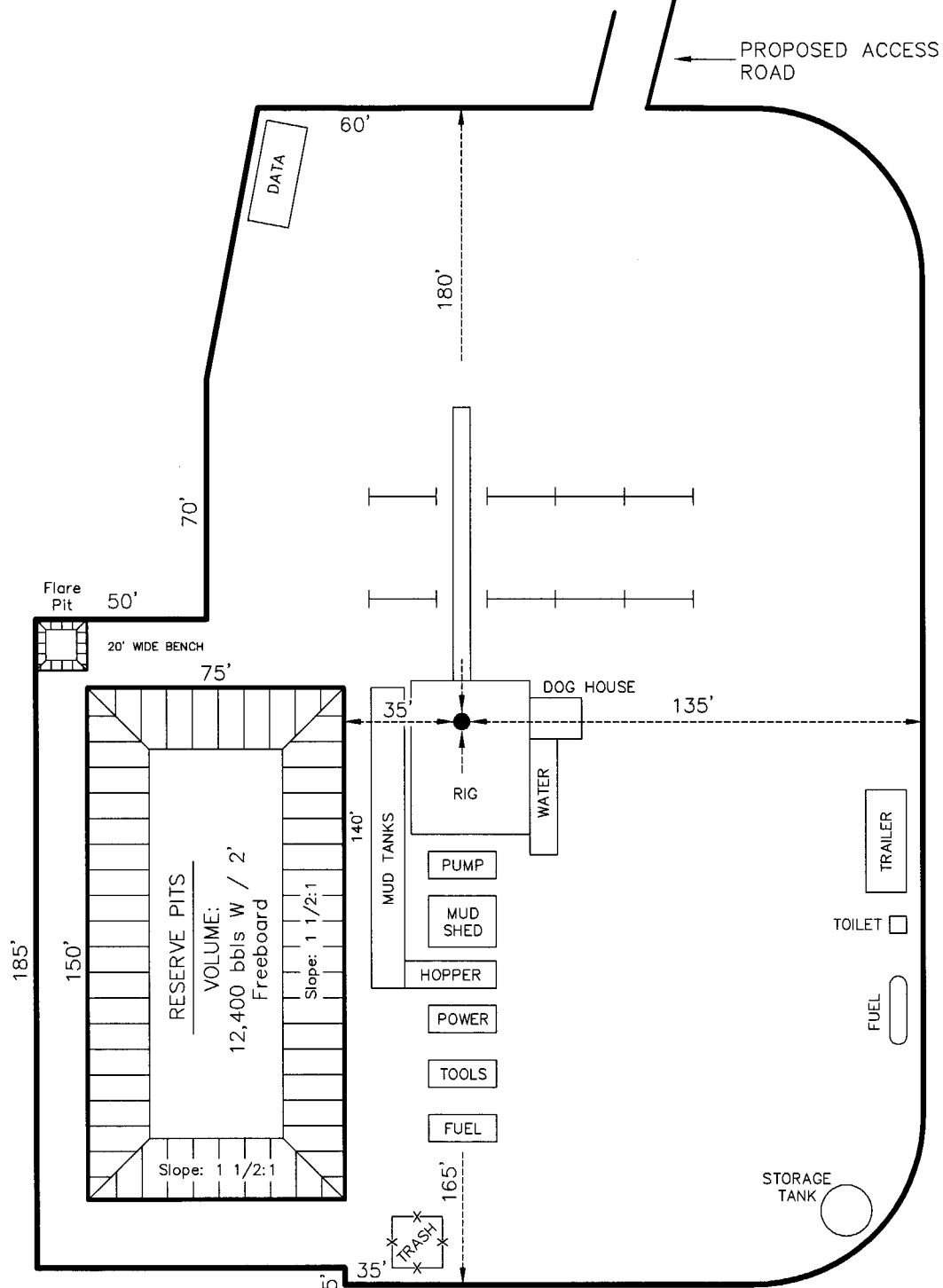
Excess Material after Pit Rehabilitation = 0 Cu. Yds.

Section 29, T9S, R24E, S.L.B.&M.		Qtr/Qtr Location: SW SW	Footage Location: 753' FSL & 736' FWL
Date Surveyed: 10-18-05	Date Drawn: 11-4-05	Date Last Revision:	Timberline (435) 789-1365 Land Surveying, Inc. 38 WEST 100 NORTH VERNAL, UTAH 84078
Surveyed By: K.R.K.	Drawn By: J.R.S.	Scale: 1" = 50'	

SHEET
4
OF 10

THURSTON ENERGY OPERATING COMPANY

TYPICAL RIG LAYOUT THURSTON 13-29-9-24

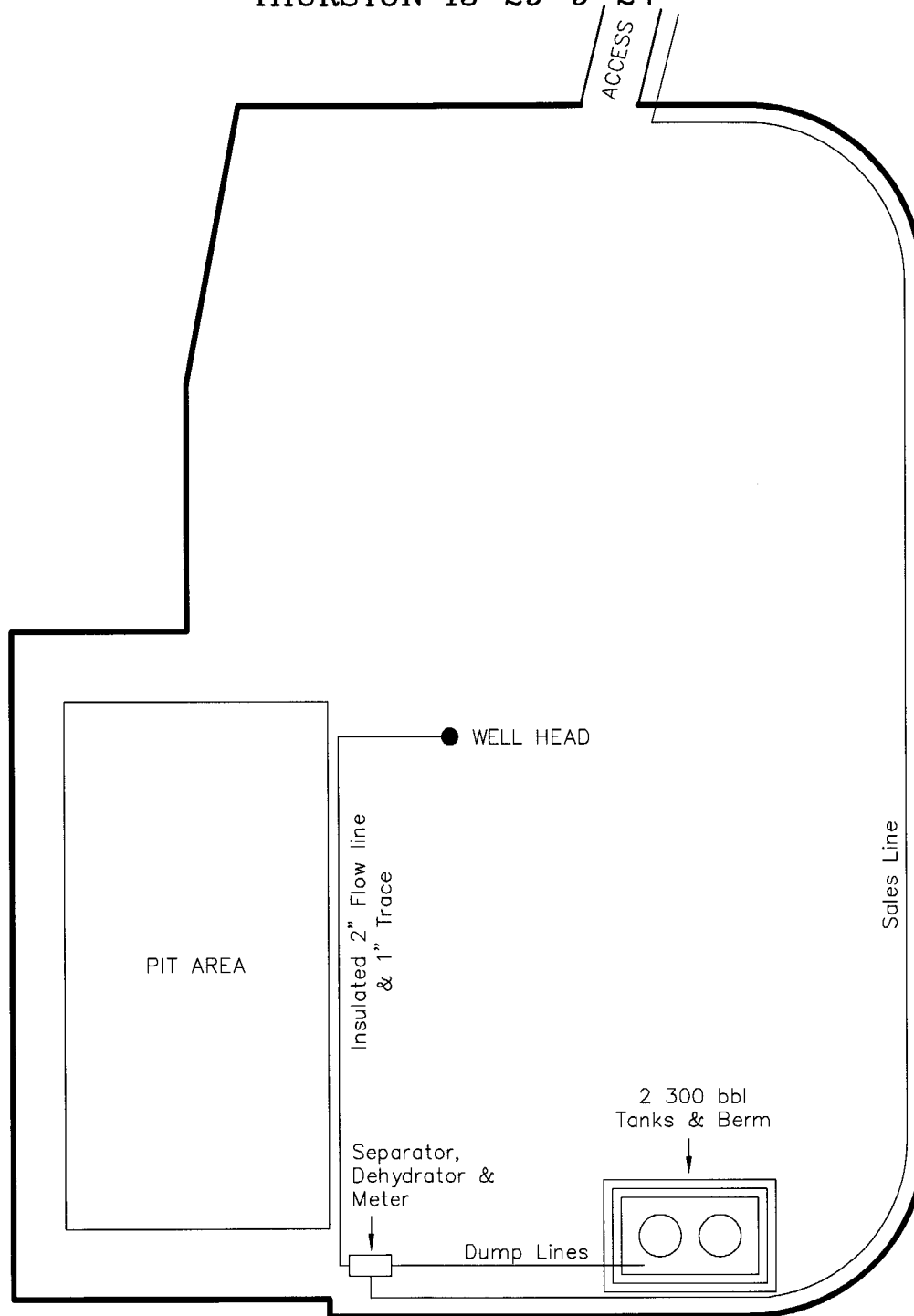


Section 29, T9S, R24E, S.L.B.&M.		Qtr/Qtr Location: SW SW	Footage Location: 753' FSL & 736' FWL
Date Surveyed: 10-18-05	Date Drawn: 11-4-05	Date Last Revision:	Timberline (435) 789-1365
Surveyed By: K.R.K.	Drawn By: J.R.S.	Scale: 1" = 50'	Land Surveying, Inc.
38 WEST 100 NORTH VERNAL, UTAH 84078			SHEET 5 OF 10

THURSTON ENERGY OPERATING COMPANY

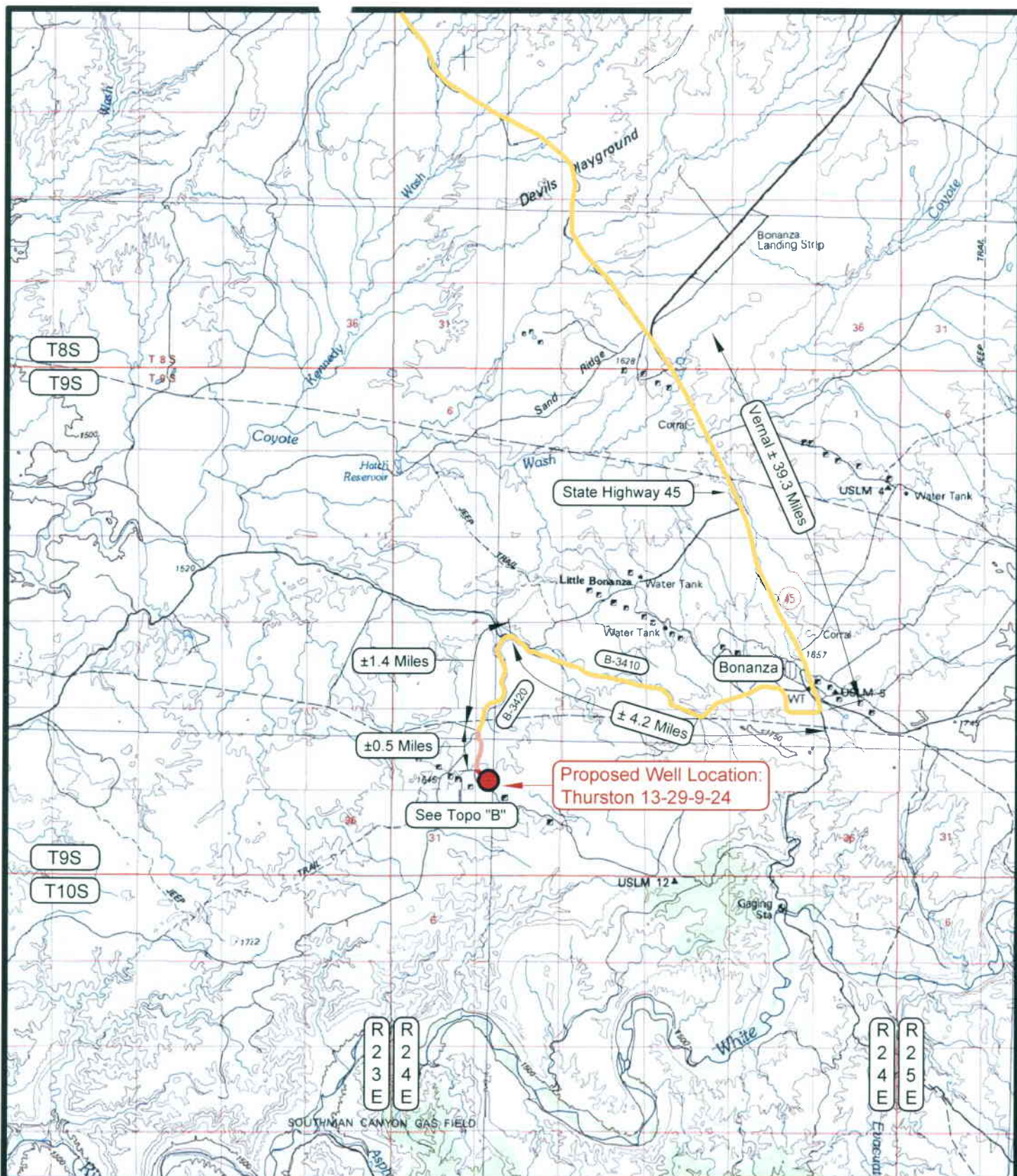
TYPICAL PRODUCTION LAYOUT

THURSTON 13-29-9-24



Section 29, T9S, R24E, S.L.B.&M.		Qtr/Qtr Location: SW SW	Footage Location: 753' FSL & 736' FWL
Date Surveyed: 10-18-05	Date Drawn: 11-4-05	Date Last Revision:	Timberline (435) 789-1365 Land Surveying, Inc. 38 WEST 100 NORTH VERNAL, UTAH 84078
Surveyed By: K.R.K.	Drawn By: J.R.S.	Scale: 1" = 50'	

SHEET
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OF 10



LEGEND

- = PROPOSED WELL LOCATION
- = EXISTING ROAD
- = EXISTING ROAD (TO BE IMPROVED)
- = PROPOSED ACCESS ROAD
- B-5460 = COUNTY ROAD CLASS & NUMBER

TOPOGRAPHIC MAP "A"

SCALE: 1:100,000

DRAWN BY: M.W.V.

DATE SURVEYED: 10-18-05

DATE DRAWN: 11-02-05

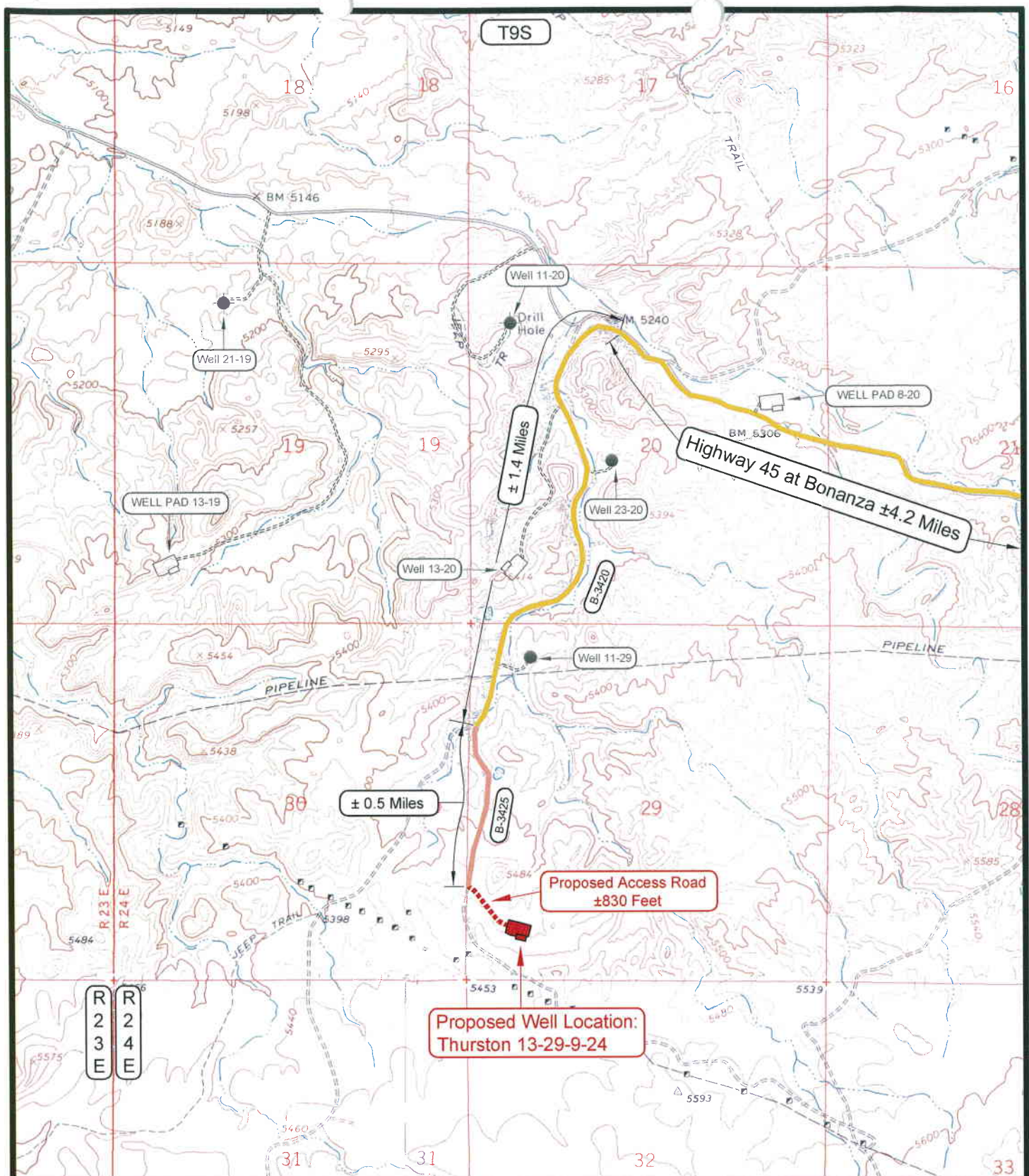
REVISED:

THURSTON ENERGY OPERATING COMPANY

Thurston 13-29-9-24
SECTION 29, T9S, R24E, S.L.B.&M.
753' FSL & 736' FWL

Timberline Land Surveying, Inc.
 38 West 100 North Vernal, Utah 84078
 (435) 789-1365

SHEET
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OF 10



LEGEND

- PROPOSED ACCESS ROAD
 ■■■■■■ = SUBJECT WELL
 ■■■■■■ = SHARED ACCESS
 ——— = EXISTING ROAD
 ——— = EXISTING ROAD (TO BE IMPROVED)
 (B-5460) = COUNTY ROAD CLASS & NUMBER
 ——— = LEASE LINE AND / OR PROPERTY LINE

TOPOGRAPHIC MAP "B"

SCALE: 1" = 2000'

DRAWN BY: M.W.W.

DATE SURVEYED: 10-18-05

DATE DRAWN: 11-02-05

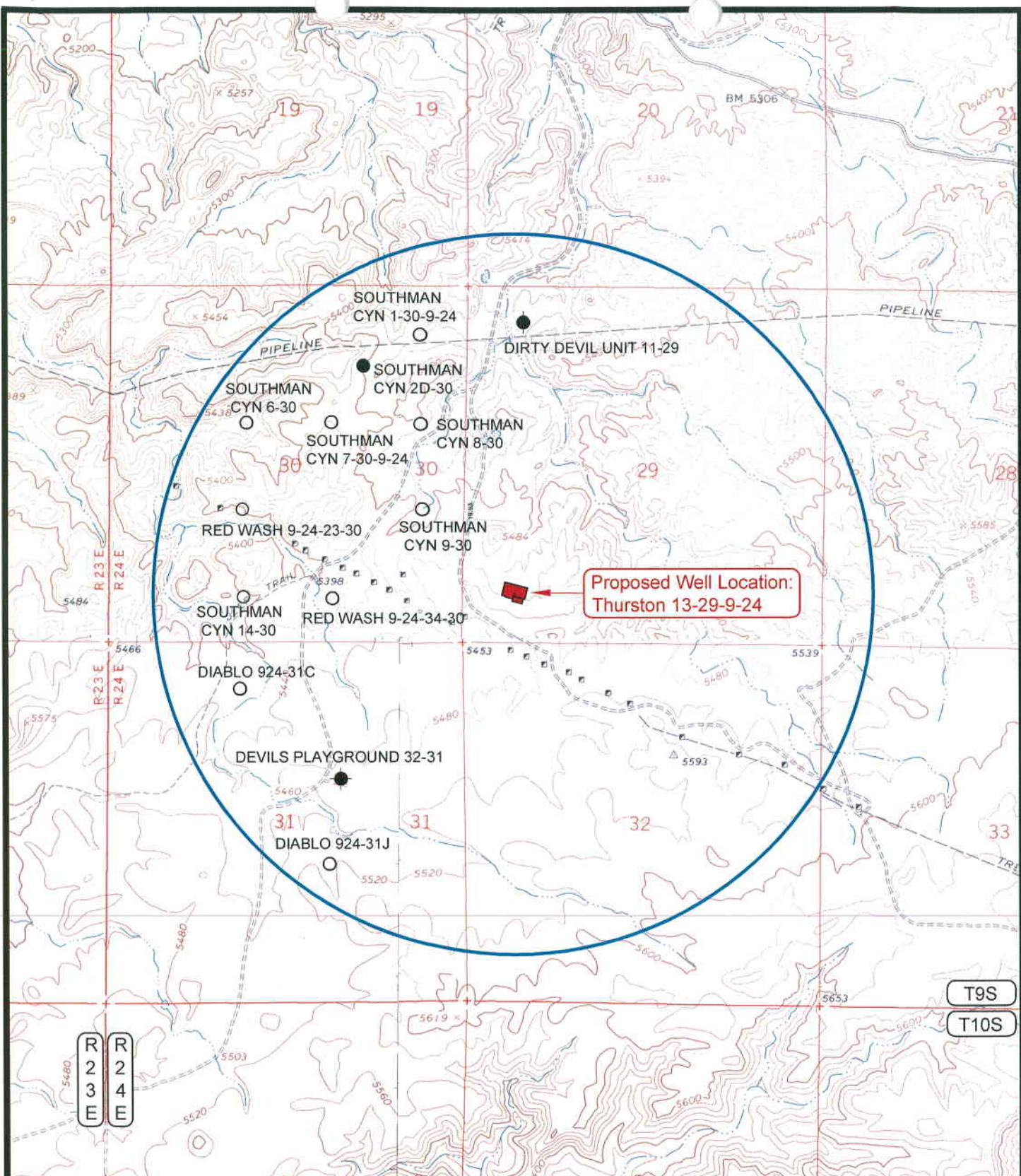
REVISED:

THURSTON ENERGY OPERATING COMPANY

Thurston 13-29-9-24
SECTION 29, T9S, R24E, S.L.B.&M.
753' FSL & 736' FWL

Timberline Land Surveying, Inc.
 38 West 100 North Vernal, Utah 84078
 (435) 789-1365

SHEET
 8
 OF 10



LEGEND

- ⊗ = DISPOSAL WELL
- = PRODUCING WELL
- = SHUT IN WELL
- = PROPOSED WELL
- ⊗ = WATER WELL
- = ABANDONED WELL
- = TEMPORARILY ABANDONED WELL
- ⊗ = ABANDONED LOCATION

TOPOGRAPHIC MAP "C"

DATE SURVEYED: 10-18-05

DATE DRAWN: 11-01-05

SCALE: 1" = 2000'

DRAWN BY: M.W.W.

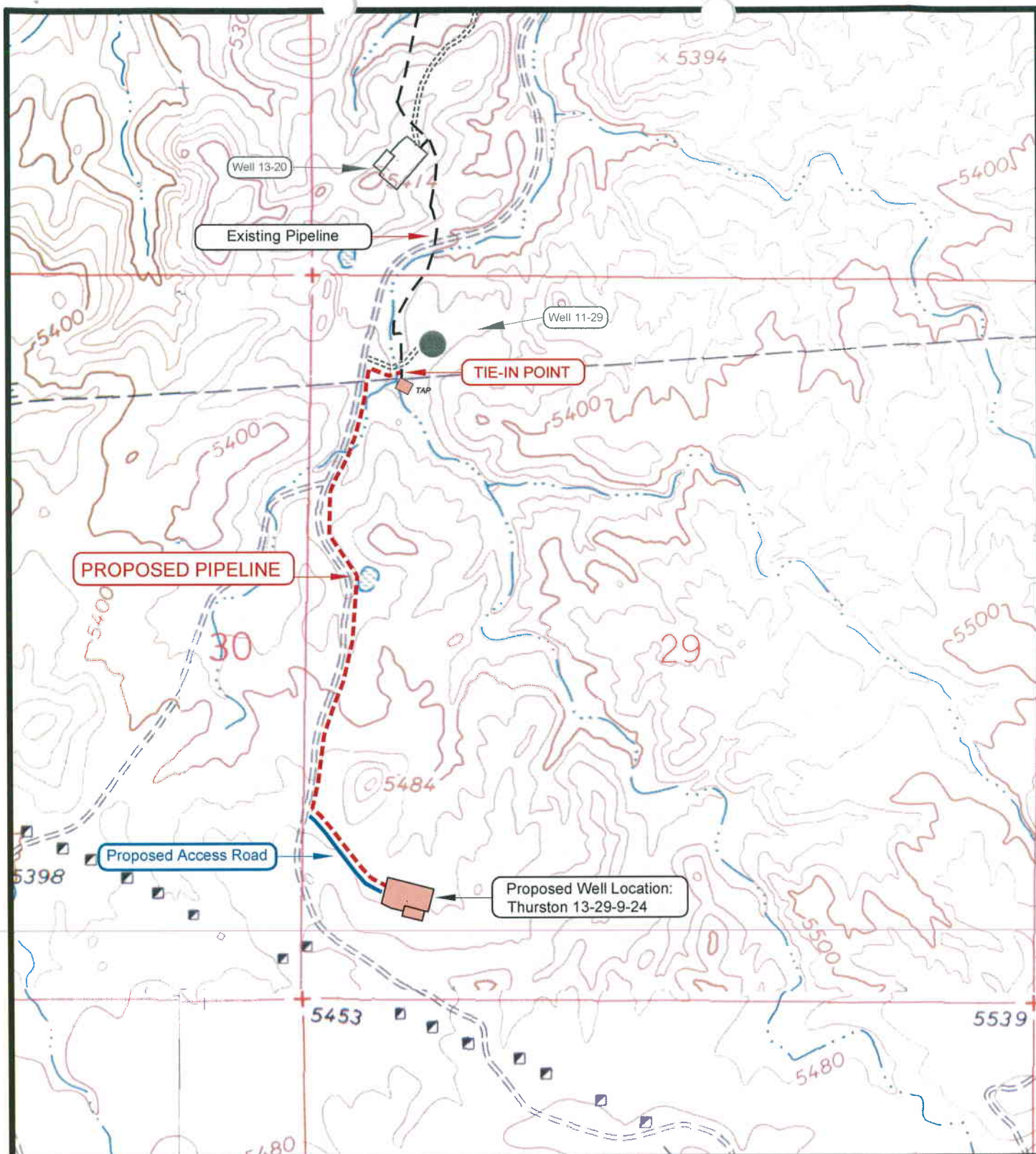
REVISED:

THURSTON ENERGY OPERATING COMPANY

Thurston 13-29-9-24
SECTION 29, T9S, R24E, S.L.B.&M.
753' FSL & 736' FWL

Timberline Land Surveying, Inc.
 38 West 100 North Vernal, Utah 84078
 (435) 789-1365

SHEET
 9
 OF 10



APPROXIMATE PIPELINE LENGTH = ± 4,430 Feet

LEGEND

- = OTHER PIPELINE
- - - = PROPOSED PIPELINE
- = PROPOSED ACCESS ROAD
- = LEASE LINE AND / OR PROPERTY LINE

TOPOGRAPHIC MAP "D"

DATE SURVEYED: 10-18-05

DATE DRAWN: 11-02-05

SCALE: 1" = 1000'

DRAWN BY: M.W.W.

REVISED:

THURSTON ENERGY OPERATING COMPANY

Thurston 13-29-9-24

SECTION 29, T9S, R24E, S.L.B.&M.

753' FSL & 736' FWL

Timberline Land Surveying, Inc.

38 West 100 North Vernal, Utah 84078
(435) 789-1365

SHEET

10

OF 10

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/18/2005

API NO. ASSIGNED: 43-047-37406

WELL NAME: THURSTON 13-29-9-24

OPERATOR: THURSTON ENERGY (N2790)

CONTACT: BILL RYAN

PHONE NUMBER: 435-789-0968

PROPOSED LOCATION:

SWSW 29 090S 240E

SURFACE: 0753 FSL 0736 FWL

BOTTOM: 0753 FSL 0736 FWL

UINTAH

WILDCAT (1)

LEASE TYPE: 3 - State

LEASE NUMBER: ML-22161

SURFACE OWNER: 1 - Federal

PROPOSED FORMATION: CSLGT

COALBED METHANE WELL? NO

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering	Dick	11/22/05
Geology		
Surface		

LATITUDE: 40.00181

LONGITUDE: -109.2441

RECEIVED AND/OR REVIEWED:

☒ Plat

☒ Bond: Fed[] Ind[] Sta[] Fee[]
(No. 0269435251)

☒ Potash (Y/N)

☒ Oil Shale 190-5 (B) or 190-3 or 190-13

☒ Water Permit

(No. T75376)

☒ RDCC Review (Y/N)
(Date: 12/06/2005)

☒ Fee Surf Agreement (Y/N)

☒ Intent to Commingle (Y/N)

LOCATION AND SITING:

___ R649-2-3.

Unit _____

☒ R649-3-2. General

Siting: 460' From Qtr/Qtr & 920' Between Wells

___ R649-3-3. Exception

___ Drilling Unit

Board Cause No: _____

Eff Date: _____

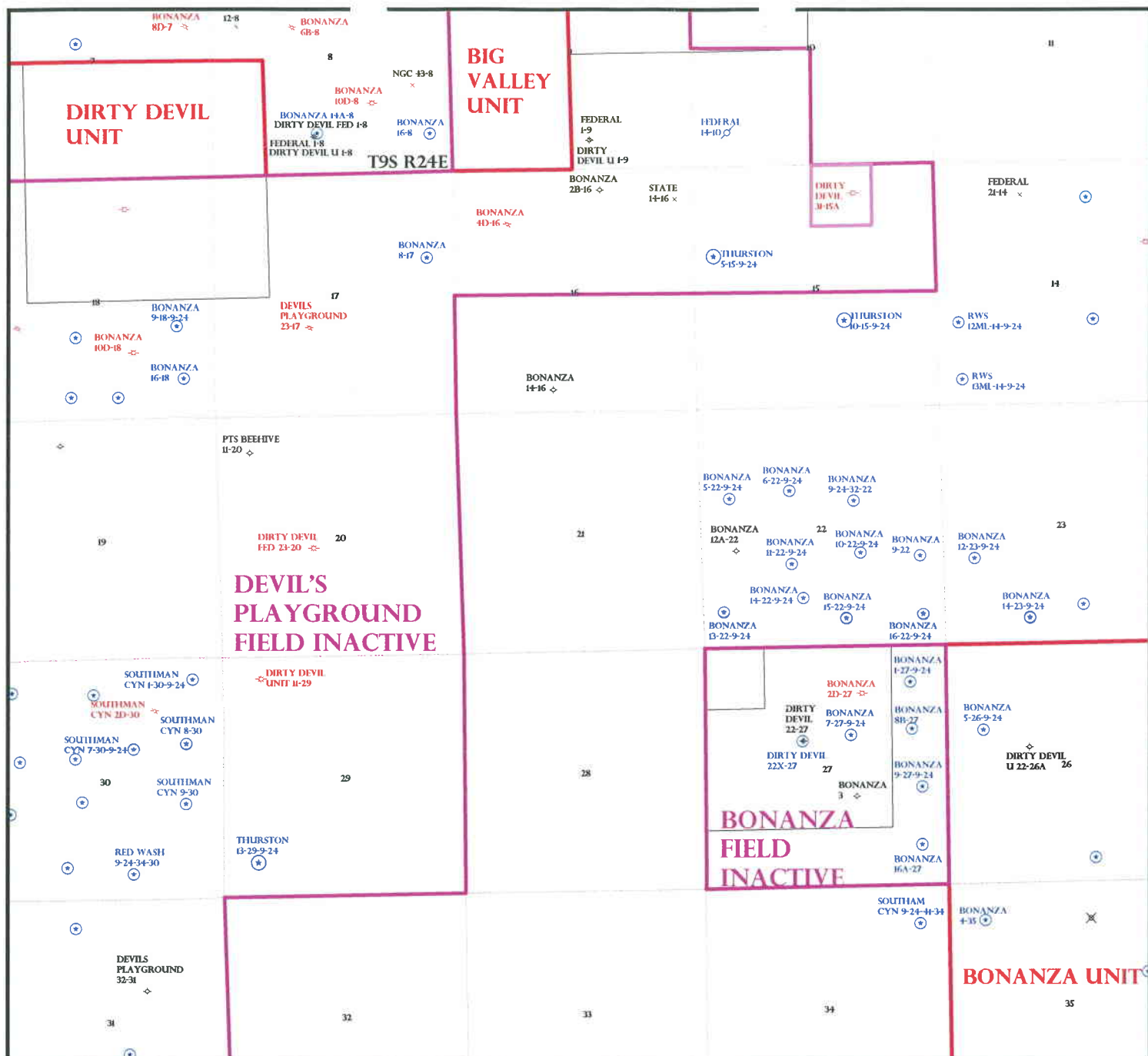
Siting: _____

___ R649-3-11. Directional Drill

COMMENTS:

STIPULATIONS:

- 1- Bond Approved
- 2- Spacing Strip
- 3- Surface Csg Cont Strip
- 4- Cont Strip #3 (4 1/2" production, 2500' min)
- 5- STATEMENT OF BASIS



OPERATOR: THURSTON ENERGY N2790)

SEC: 15,29 T. 9S R. 24E

FIELD: WILDCAT (001)

COUNTY: UTAH

SPACING: R649-3-2 / GENERAL SITING

Field Status

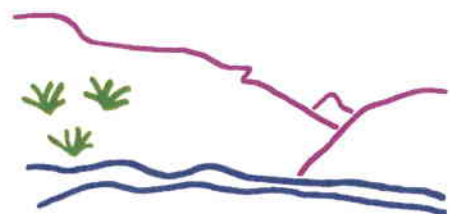
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- PROPOSED
- STORAGE
- TERMINATED

Unit Status

- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PENDING
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Wells Status

- GAS INJECTION
- GAS STORAGE
- LOCATION ABANDONED
- NEW LOCATION
- PLUGGED & ABANDONED
- PRODUCING GAS
- PRODUCING OIL
- SHUT-IN GAS
- SHUT-IN OIL
- TEMP. ABANDONED
- TEST WELL
- WATER INJECTION
- WATER SUPPLY
- WATER DISPOSAL
- DRILLING



Utah Oil Gas and Mining



PREPARED BY: DIANA WHITNEY
DATE: 21-NOVEMBER-2005

**DIVISION OF OIL, GAS AND MINING
APPLICATION FOR PERMIT TO DRILL
STATEMENT OF BASIS**

OPERATOR: Thurston Energy Operating Company
WELL NAME & NUMBER: Thurston 13-29-9-24
API NUMBER: 43-047-37406
LOCATION: 1/4,1/4 SW/SW Sec: 29 TWP: 9S RNG: 24E 753 FSL 736 FWL

Geology/Ground Water:

Thurston has proposed setting 2,000 feet of surface casing cemented to surface. The depth of the moderately saline water is estimated at 3,900'. A search of Division of Water Rights records shows no water wells within a radius of 10,000' from the center of Section 29. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The Green River Formation is expected to be very near the ground surface. Freshwater aquifers can be found in the Green River Formation and should be protected. Production casing cement should be brought up above the base of the moderately saline ground water in order to protect fresher waters uphole.

Reviewer: Brad Hill **Date:** 01/23/06

Surface:

The surface rights at this location are owned by the Federal Government and administered by the BLM. The operator is responsible for obtaining all required permits and rights-of-way from the BLM prior to making any surface disturbance or commencing drilling.

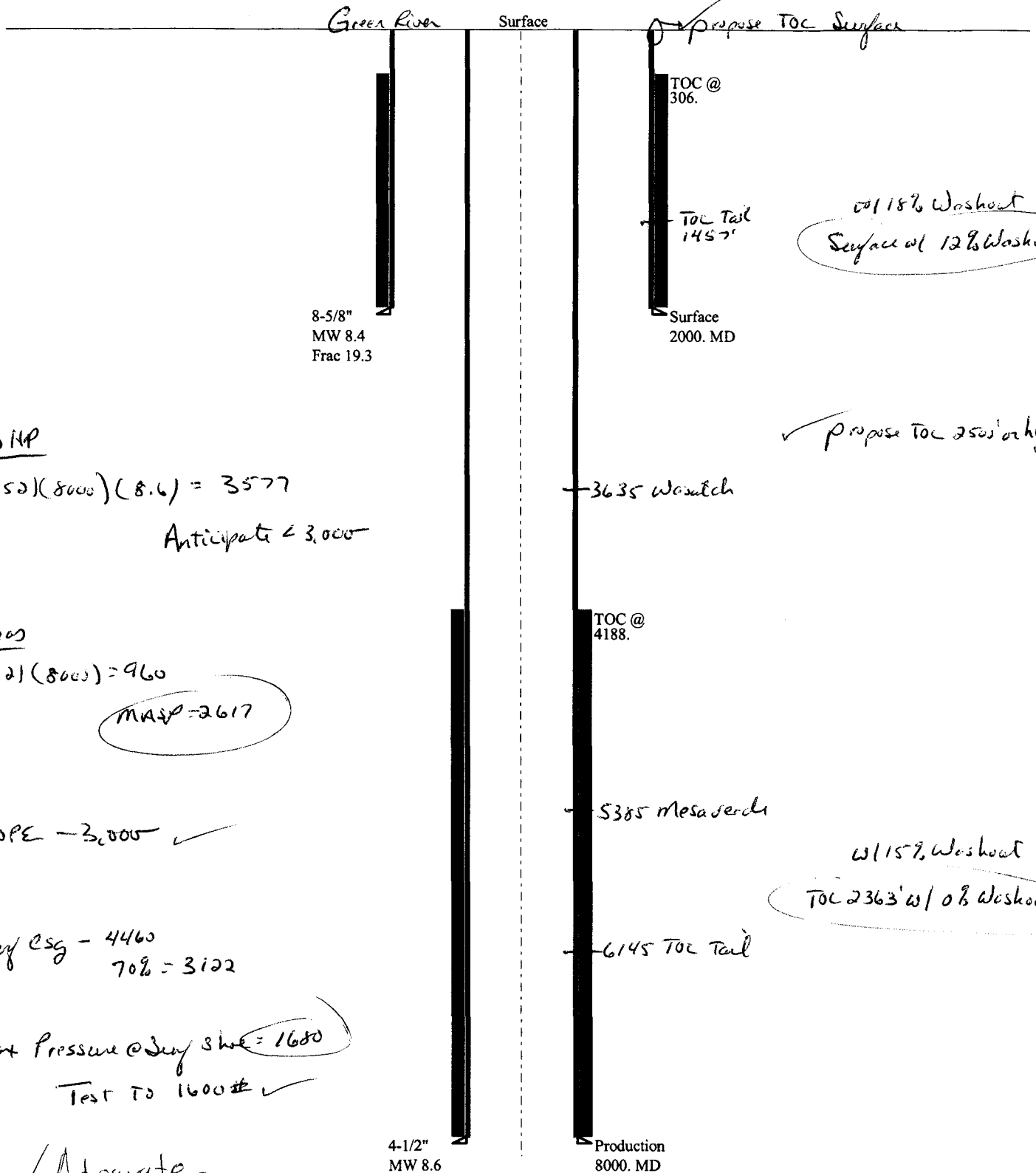
Reviewer: Brad Hill **Date:** 01/23/06

Conditions of Approval/Application for Permit to Drill:

None.

11-05 Thurston 13-29-9-2-

Casing Schematic



00118% Washout
Surface w/ 12% Washout

✓ propose TOC 2500' or higher

BNP
 $(.050)(8000)(8.6) = 3577$
Anticipate < 3,000

Gas
 $(.12)(8000) = 960$
MAWP = 2617

BOPE - 3,000 ✓

Surf csg - 4460
70% = 3122

Max Pressure @ Surf shoe = 1680
Test TO 1600# ✓

✓ Adequate Dec 11/22/05

3635 Washch

5385 Mesa Jerch

6145 TOC Tail

w/ 15% Washout
TOC 2363' w/ 0% Washout

Well name:	11-05 Thurston 13-29-9-24	
Operator:	Thurston Energy Operation	
String type:	Surface	Project ID: 43-047-37406
Location:	Uintah County, Utah	

Design parameters:
Collapse

Mud weight: 8.400 ppg
Design is based on evacuated pipe.

Minimum design factors:
Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 65 °F
Bottom hole temperature: 93 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 299 ft

Cement top: 306 ft

Burst

Max anticipated surface pressure: 83 psi
Internal gradient: 0.436 psi/ft
Calculated BHP 956 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.

Neutral point: 1,749 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 8,000 ft
Next mud weight: 8.600 ppg
Next setting BHP: 3,574 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,000 ft
Injection pressure: 2,000 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	2000	8.625	36.00	J-55	ST&C	2000	2000	7.7	143.5
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	873	3450	3.954	956	4460	4.67	72	434	6.03 J

Prepared Clinton Dworshak
by: Utah Div. of Oil & Mining

Phone: (801) 538-5281
FAX: (801) 359-3940

Date: November 21, 2005
Salt Lake City, Utah

ENGINEERING STIPULATIONS -

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	11-05 Thurston 13-29-9-24	
Operator:	Thurston Energy Operation	
String type:	Production	Project ID: 43-047-37406
Location:	Uintah County, Utah	

Design parameters:

Collapse

Mud weight: 8.600 ppg
Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 65 °F
Bottom hole temperature: 177 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: 4,189 ft

Burst

Max anticipated surface pressure: 83 psi
Internal gradient: 0.436 psi/ft
Calculated BHP 3,574 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Non-directional string.

Tension is based on air weight.

Neutral point: 6,972 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	8000	4.5	11.60	N-80	LT&C	8000	8000	3.875	185.4
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	3574	6350	1.777	3574	7780	2.18	93	223	2.40 J

Prepared by: Clinton Dworshak
Utah Div. of Oil & Mining

Phone: (801) 538-5281
FAX: (801) 359-3940

Date: November 21, 2005
Salt Lake City, Utah

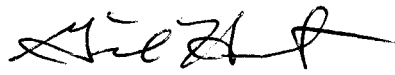
ENGINEERING STIPULATIONS -

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

STATE ACTIONS
Resource Development Coordinating Committee
Governor's Office of Planning and Budget
5110 State Office Building
SLC, UT 84114
Phone No. 537-9230

1. State Agency Oil, Gas and Mining 1594 West North Temple, Suite 1210 Salt Lake City, UT 84114-5801	2. Approximate date project will start: Upon Approval or December 5, 2005
3. Title of proposed action: Application for Permit to Drill	
4. Description of Project: Thurston Energy Operating Company proposes to drill the Thurston 13-29-9-24 well (wildcat) on a State lease ML-22161, Uintah County, Utah. This action is being presented to the RDCC for consideration of resource issues affecting state interests. The Division of Oil, Gas and Mining is the primary administrative agency in this action and must issue approval before operations commence.	
5. Location and detailed map of land affected (site location map required, electronic GIS map preferred) (include UTM coordinates where possible) (indicate county) 753' FSL 736' FWL, SW/4 SW/4, Section 29, Township 9 South, Range 24 East, Uintah County, Utah	
6. Possible significant impacts likely to occur: Surface impacts include up to five acres of surface disturbance during the drilling and completion phase (estimated for five weeks duration). If oil and gas in commercial quantities is discovered, the location will be reclaimed back to a net disturbance of between one and two acres – not including road, pipeline, or utility infrastructure. If no oil or gas is discovered, the location will be completely reclaimed.	
7. Identify local government affected a. Has the government been contacted? No. b. When? c. What was the response? d. If no response, how is the local government(s) likely to be impacted?	
8. For acquisitions of land or interests in land by DWR or State Parks please identify state representative and state senator for the project area. Name and phone number of state representative, state senator near project site, if applicable: a. Has the representative and senator been contacted? N/A	
9. Areawide clearinghouse(s) receiving state action: (to be sent out by agency in block 1) Uintah Basin Association of Governments	
10. For further information, contact: Diana Whitney Phone: (801) 538-5312	11. Signature and title of authorized officer  Gil Hunt, Associate Director Date: November 21, 2005

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐
(highlight changes)

APPLICATION FOR PERMIT TO DRILL				5. MINERAL LEASE NO: ML-22161		8. SURFACE: Federal	
1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>				7. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
B. TYPE OF WELL: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____ SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>				8. UNIT or CA AGREEMENT NAME:			
2. NAME OF OPERATOR: Thurston Energy Operating Company				9. WELL NAME and NUMBER: Thurston 13-29-9-24			
3. ADDRESS OF OPERATOR: PO BOX 240 CITY Vernal STATE UT ZIP 84078				PHONE NUMBER: (435) 789-2653		10. FIELD AND POOL, OR WILDCAT: Undesignated - Wilcox	
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 753' FSL & 736' FWL <i>649887X 40.00181</i> AT PROPOSED PRODUCING ZONE: SAME AS ABOVE <i>4429225Y -109.24410</i>				11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWSW 29 9 24E			
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 38.1 miles South of Vernal, UT				12. COUNTY: Uintah		13. STATE: UTAH	
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) 736'		16. NUMBER OF ACRES IN LEASE: 320		17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 40			
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) 4,100'		19. PROPOSED DEPTH: 8,000		20. BOND DESCRIPTION: 0269434510			
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 5439.2 GR		22. APPROXIMATE DATE WORK WILL START: 12/31/2005		23. ESTIMATED DURATION: 30 DAYS			

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
12 1/4	8 5/8 J-55 36#	2,000	PREMIUM LITE II 250 SX 3.38 CF 11.0 PPG
			CLASS "G" 329 SX 1.2 CF 15.6 PPG
			CALCIUM CHLORIDE 200 SX 1.10 CF 15.6 PPG
7 7/8	4 1/2 N-80 11.6#	8,000	PREMIUM LITE II 200 SX 3.3 CF 14.3 PPG

ATTACHMENTS

CONFIDENTIAL

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

- | | |
|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER | <input checked="" type="checkbox"/> COMPLETE DRILLING PLAN |
| <input checked="" type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER | <input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER |

NAME (PLEASE PRINT) <u>WILLIAM A RYAN</u>	TITLE <u>AGENT</u>
SIGNATURE <u><i>William A Ryan</i></u>	DATE <u>11/14/2005</u>

(This space for State use only)

API NUMBER ASSIGNED: **43-047-37406**

APPROVAL:

RECEIVED

NOV 18 2005

DIV. OF OIL, GAS & MINING

THURSTON ENERGY OPERATING COMPANY

NOTES:

-

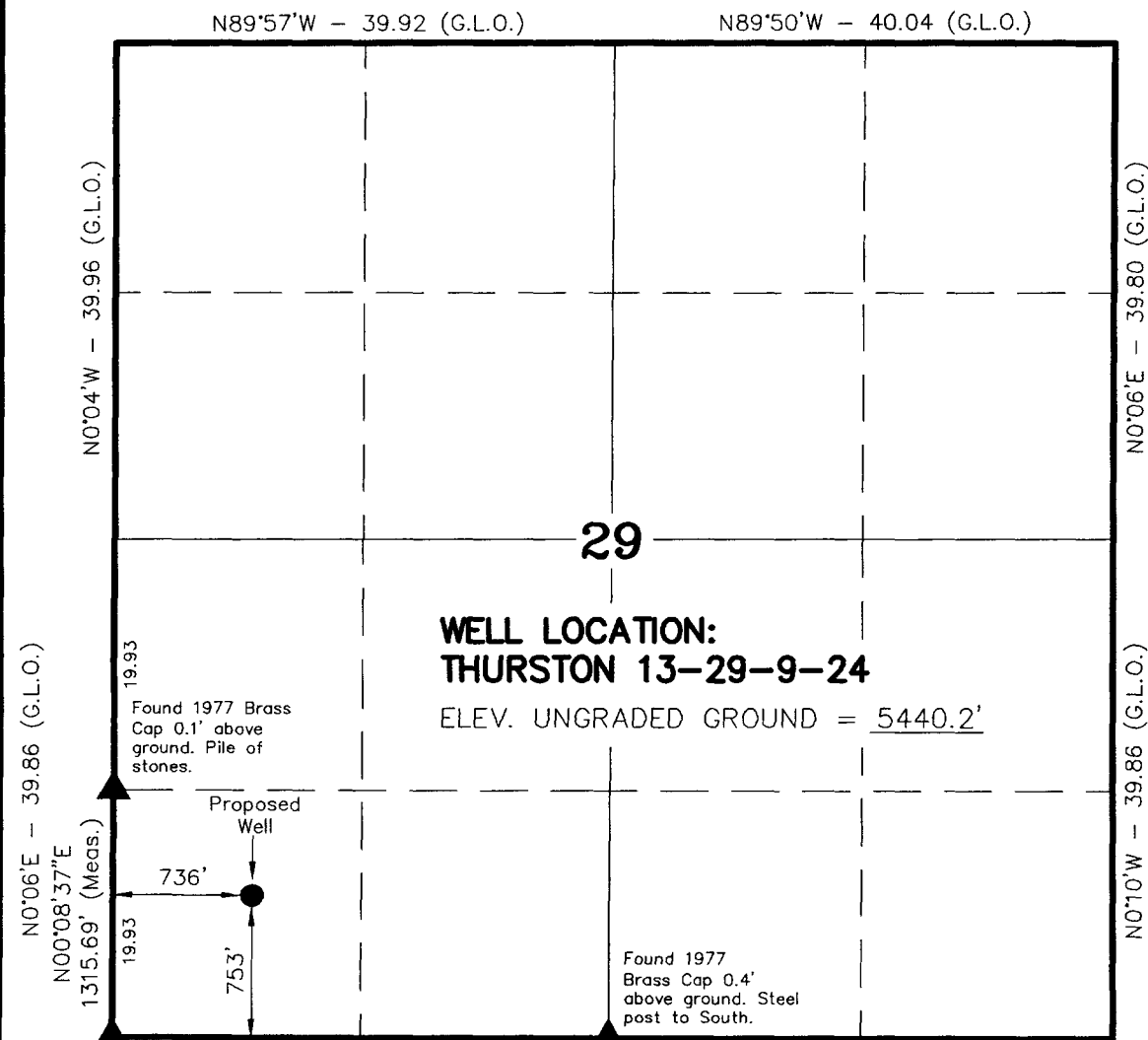
REGISTERED LAND SURVEYOR
REGISTRATION NO. 312251
STATE OF UTAH

38 WEST 100 NORTH. - VERNAL, UTAH 84078
(435) 789-1365

SHEET

2

OF 10



Found 1977
Brass Cap 0.6'
above ground. Pile
of stones to West.
Cedar Post to North

S89°59'10"W - (Basis of Bearings)
2623.77' (Measured)
S89°57'W - 39.75 (G.L.O.)

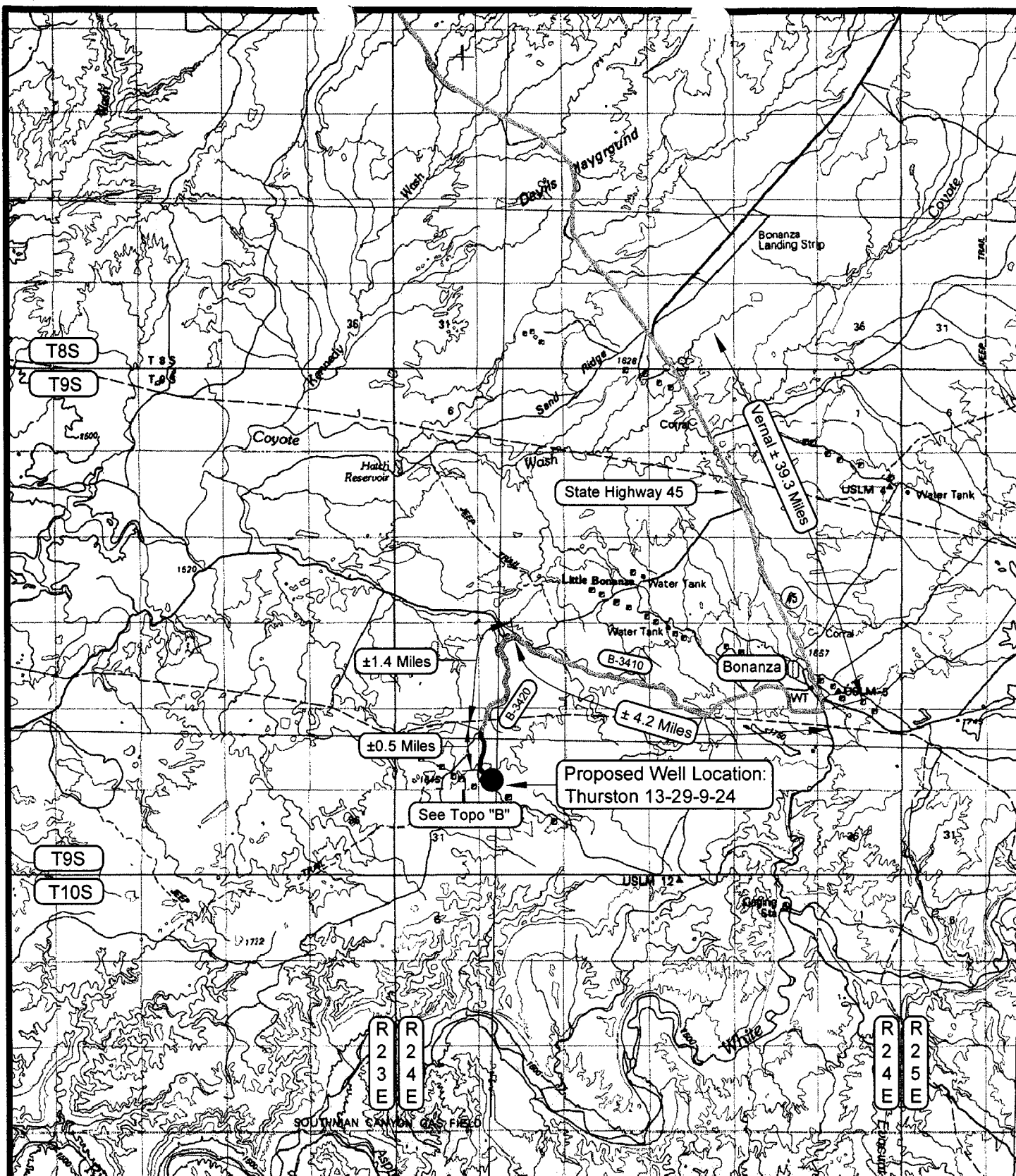
N89°59'W - 40.32 (G.L.O.)

THURSTON 13-29-9-24
(Proposed Well Head)
NAD 83 Autonomous

LATITUDE = 40° 00' 06.4"
LONGITUDE = 109° 14' 40.9"

▲ = SECTION CORNERS LOCATED

BASIS OF ELEVATION IS BENCH MARK 46 EAM LOCATED IN THE SW 1/4 OF SECTION 23, T9S, R24E, S.L.B.&M. THE ELEVATION OF THIS BENCH MARK IS SHOWN ON THE BONANZA 7.5 MIN. QUADRANGLE AS BEING 5550'.



LEGEND

- = PROPOSED WELL LOCATION
- = EXISTING ROAD
- = EXISTING ROAD (TO BE IMPROVED)
- = PROPOSED ACCESS ROAD
- B-5460 = COUNTY ROAD CLASS & NUMBER

TOPOGRAPHIC MAP "A"

SCALE: 1:100,000

DRAWN BY: M.W.W.

DATE SURVEYED: 10-18-05

DATE DRAWN: 11-02-05

REVISED:

THURSTON ENERGY OPERATING COMPANY

Thurston 13-29-9-24
SECTION 29, T9S, R24E, S.L.B.&M.
753' FSL & 736' FWL

Timberline Land Surveying, Inc.
 38 West 100 North Vernal, Utah 84078
 (435) 789-1365

SHEET
7
OF 10

From: Robert Clark
To: Whitney, Diana
Date: 11/28/2005 9:17:07 AM
Subject: RDCC short turn around responses

The following comments are being submitted directly to DOG&M due to their short turn around status.

The following comments are submitted for **RDCC #5944-5949**. The comments pertain to all projects. **Comments begin:** The proposed *North Horseshoe 12-7-6-22, 16-9-6-22, 14-10-6-22, 2-15-6-22, 4-15-6-22, and 3-16-6-21* well drilling projects in Uintah County may require a permit, known as an Approval Order, from the Utah Division of Air Quality if any compressor stations are constructed at the site. A permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, SLC, UT, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The proposed project is also subject to Utah Air Quality Rule R307-205-3, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Division of Air Quality, but steps need to be taken to minimize fugitive dust, such as, watering and/or chemical stabilization, providing vegetative or synthetic cover and windbreaks. A copy of the rules may be found at www.rules.utah.gov/publicat/code/r307/r307.htm. **Comments end.**

The following comments are submitted for **RDCC #5950-5952**. The comments pertain to all projects. **Comments begin:** The proposed *Thurston 5-15-9-24, 13-29-9-24, and 10-15-9-24* well drilling projects in Uintah County may require a permit, known as an Approval Order, from the Utah Division of Air Quality if any compressor stations are constructed at the site. A permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, SLC, UT, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The proposed project is also subject to Utah Air Quality Rule R307-205-3, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Division of Air Quality, but steps need to be taken to minimize fugitive dust, such as, watering and/or chemical stabilization, providing vegetative or synthetic cover and windbreaks. A copy of the rules may be found at www.rules.utah.gov/publicat/code/r307/r307.htm. **Comments end.**

Robert Clark

Division of Air Quality
536-4435

CC: McNeill, Dave; Wright, Carolyn

Project Number: 5951 Sponsor: Division of Oil, Gas and Mining
SLB&M: Sec. 29, T9S, R24E Counties Affected: Uintah
Description: Application for Permit to Drill - proposal to drill a wildcat well

Comments:

Wellpad placement disturbs soils. Vegetative and/or structural measures to control erosion shall be implemented within 60 days of initial soil disturbance to prevent erosion leaving the site from exceeding the tolerable rate as determined by the local office of USDA/NRCS.

Further, if vegetation surrounding the wellpad does not provide at least 60% ground cover within 60 days of creating the wellpad, engineering practices shall be implemented within those 60 days to control erosion. Such measures may include mulching, use of fiber mats, cross slope trenching, contour furrows, rock dams, terracing or such other erosion control practices as are required to prevent erosion from exceeding the tolerable rate.

In addition, no negative disturbance or degradation to or of surrounding or nearby soils, native or beneficial vegetation, or riparian areas shall be permitted.

In addition, no spills of chemicals including hydrocarbons, lubricants, salt water, antifreeze, or other potentially damaging materials shall be permitted.



State of Utah

**Department of
Natural Resources**

MICHAEL R. STYLER
Executive Director

**Division of
Oil, Gas & Mining**

JOHN R. BAZA
Division Director

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

January 23, 2006

Thurston Energy Operating Company
P O Box 240
Vernal, UT 84078

Re: Thurston 13-29-9-24 Well, 753' FSL, 736' FWL, SW SW, Sec. 29, T. 9 South,
R. 24 East, Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-37406.

Sincerely,

Gil Hunt
Associate Director

pab
Enclosures

cc: Uintah County Assessor
SITLA
Bureau of Land Management, Vernal District Office

Operator: Thurston Energy Operating Company
Well Name & Number Thurston 13-29-9-24
API Number: 43-047-37406
Lease: ML-22161

Location: SW SW **Sec.** 29 **T.** 9 South **R.** 24 East

Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- 24 hours prior to cementing or testing casing
- 24 hours prior to testing blowout prevention equipment
- 24 hours prior to spudding the well
- within 24 hours of any emergency changes made to the approved drilling program
- prior to commencing operations to plug and abandon the well

The following are Division of Oil, Gas and Mining contacts and their work telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at (801) 538-5338
- Carol Daniels at (801) 538-5284 (spud)

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.

5. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)

6. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

7. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.
8. Operator shall comply with applicable recommendations resulting from Resource Development Coordinating Committee review. Statements attached.
9. Surface casing shall be cemented to the surface.
10. Cement volume for the 4 1/2" production string shall be determined from actual hole diameter in order to place cement from the pipe setting depth back to 2500' MD as indicated in the submitted drilling plan.

Thurston Energy Operating Company

2754 W. Hwy 40

Vernal, Utah 84078

(435) 789-2653

June 20, 2006

Earlene Russell
Division of Oil, Gas & Mining
P.O. Box 145801
Salt Lake City, Utah 84117

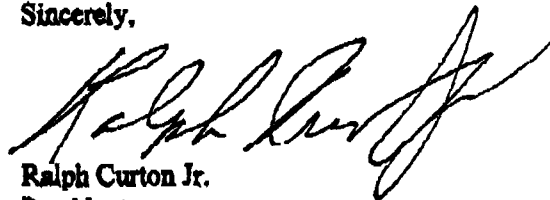
Re: Transfer of Bond from Thurston well 13-29-9-24 to 12-19-9-24

Dear Ms. Russell:

This letter hereby requests that bond # 0269435251 be rescinded from well number 13-29-9-24 and moved to well number 12-29-9-24 due to the declining of approval of the 13-29-9-24 site as a result of arch survey findings.

Thank you for your time and courtesy concerning this matter.

Sincerely,



Ralph Curton Jr.
President
Thurston Energy Operating Company

rc/cr

RECEIVED

JUN 30 2006

DIV. OF OIL, GAS & MINING



State of Utah

**Department of
Natural Resources**

MICHAEL R. STYLER
Executive Director

**Division of
Oil, Gas & Mining**

JOHN R. BAZA
Division Director

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

July 17, 2006

Ralph Curton Jr.
Thurston Energy Operating Co.
P.O. Box 240
Vernal, Utah 84078

Re: APD Rescinded -Thurston 13-29-9-24 Sec. 29, T. 9S R. 24E
Uintah County, Utah API No. 43-047-37406

Dear Mr. Curton:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on January 23, 2006. On July 7, 2006, you requested that the division rescind the state approved APD. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective July 7, 2006.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Whitney
Engineering Technician

cc: Well File
SITLA, Ed Bonner
Bureau of Land Management, Vernal

Thurston Energy Operating Company

2754 W. Hwy 40

Vernal, Utah 84078

(435) 789-2653

(435) 789-2657 Fax

BLM, Vernal Field Office

170 S 500 E

Vernal, UT 84078

T09S R24E S29
43-047-37400

Dear Sir or Madam,

Due to a large archeological/historical site (please see report #1479), Thurston Energy Operating Company respectfully requests to withdraw the Thurston 13-29-9-24 Right-of-Way applications for the location, road and pipeline. The serial numbers for the applications are UTU-82751(pipeline), UTU-82754(road) and Thurston Energy Operating Company was not provided a serial number for the location.

Best regards,

Ginger Stringham

Ginger Stringham

RECEIVED

AUG 03 2006

DIV. OF OIL, GAS & MINING